

present the wreathed part broken into two pieces, whereof the end AB is to be suppos'd to have join'd to the end CD, so that EA CF does represent the whole wreath'd part of the Beard, and EG a small piece of the upper part of the Beard which is beyond the knee, which as I had not room to insert, so was it not very considerable, either for its form, or any known property; but the under or wreathed part is notable for both: As to its form, it appear'd, if it were look'd on side-ways, almost like a Willow, or a small tapering rod of *Hazel*, the lower or bigger half of which onely, is twisted round several times, in some three, in others more, in others less, according to the bigness and maturity of the Grain on which it grew, and according to the driness and moisture of the ambient Air, as I shall shew more at large by and by.

The whole outward Superficies of this Cylindrical body is curiously adorned or fluted with little channels, and interjacent ridges, or little *protuberances* between them, which run the whole length of the Beard, and are streight where the Beard is not twisted, and wreath'd where it is, just after the same manner: each of those sides is beset pretty thick with small Bristles or Thorns, somewhat in form resembling that of *Porcupines* Quills, such as *aaaaa* in the Figure; all whose points are directed like so many Turn-pikes towards the small end or top of the Beard, which is the reason, why, if you endeavour to draw the Beard between your fingers the contrary way, you will find it to flick, and grate, as it were, against the skin.

The proportion of these small conical bodies *aaaaa* to that whereon they grow, the Figure will sufficiently shew, as also their manner of growing, their thickness, and nearness to each other, as, that towards the root or bottom of the Beard, they are more thin, and much shorter, inasmuch that there is usually left between the top of the one, and the bottom of that next above it, more then the length of one of them, and that towards the top of the Beard they grow more thick and close (though there be fewer ridges) so that the root, and almost half the upper are hid by the tops of those next below them.

I could not perceive any *transverse* pores, unless the whole wreath'd part were separated and cleft, in those little channels, by the wreathing into so many little strings as there were ridges, which was very difficult to determine; but there were in the wreathed part two very conspicuous channels or clefts, which were continued from the bottom F to the elbow EH, or all along the part which was wreath'd, which seem'd to divide the wreath'd Cylinder into two parts, a bigger and a less; the bigger was that which was at the *convex* side of the knee, namely, on the side A, and was wreath'd by OOOO; this, as it seem'd the broader, so did it also the longer, the other P P P P, which was usually purs'd or wrinkled in the bending of the knee, as about E, seem'd both the shorter and narrower, so that at first I thought the wreathing and unwreathing of the Beard might have been caus'd by the shrinking or swelling of that part; but upon further examination, I found that the clefts, K K, L L, were stuff'd up with a kind of Spongie substance, which, for the most part, was very

very conspicuous neer the knee, as in the cleft K K, when the Beard was dry; upon the discovery of which, I began to think, that it was upon the swelling of this porous pith upon the access of moisture or water that the Beard, being made longer in the midst, was streightned, and by the shrinking or subsiding of the parts of that Spongie substance together, when the water or moisture was exhal'd or dried, the pith or middle parts growing shorter, the whole became twisted.

But this I cannot be positive in, for upon cutting the wreath'd part in many places transversely, I was not so well satisfy'd with the shape and manner of the pores of the pith; for looking on these transverse Sections with a very good *Microscope*, I found that the ends of those transverse Sections appear'd much of the manner of the third Figure of the 15. *Scheme* ABCFE, and the middle or pith CC, seem'd very full of pores indeed, but all of them seem'd to run the long-ways.

This Figure plainly enough shews in what manner those clefts, K and L divided the wreath'd Cylinder into two unequal parts, and also of what kind of substance the whole body consists; for by cutting the same Beard in many places, with transverse Sections, I found much the same appearance with this express'd; so that those pores seem to run, as in most other such Cany bodies, the whole length of it.

The clefts of this body K K, and L L, seem'd (as is also express'd in the Figure) to wind very oddly in the inner part of the wreath; and in some parts of them, they seem'd stuff'd, as it were, with that Spongie substance, which I just now described.

This so oddly constituted Vegetable substance, is first (that I have met with) taken notice of by *Baptista Porta*, in his *Natural Magick*, as a thing known to children and Juglers, and it has been call'd by some of those last named persons, the better to cover their cheat, the Legg of an *Arabian Spider*, or the Legg of an enchanted *Egyptian Fly*, and has been used by them to make a small Index, Cross, or the like, to move round upon the wetting of it with a drop of Water, and muttering certain words.

But the use that has been made of it, for the discovery of the various constitutions of the Air, as to driness and moistness, is incomparably beyond any other; for this it does to admiration: The manner of contriving it so, as to perform this great effect, is onely thus:

Provide a good large Box of Ivory, about four Inches over, and of what depth you shall judge convenient (according to your intention of making use of one, two, three, or more of these small Beards, ordered in the manner which I shall by and by describe) let all the sides of this Box be turned of Basket-work (which here in *London* is easily enough procur'd) full of holes, in the manner almost of a Lettice, the bigger, or more the holes are, the better, that so the Air may have the more free passage to the inclosed Beard, and may the more easily pass through the Instrument; it will be better yet, though not altogether so handsom, if instead of the Basket-work on the sides of the Box, the bottom and top of the Box be join'd together onely with three or four small Pillars, after the manner represented